

CLAIMS:

1. A method of manipulating sub-pictures of a compressed video signal, comprising the steps of:
 - generating a video signal comprising a plurality of sub-pictures;
 - dividing at least a first frame of the video signal into a plurality of
 - 5 uncompressed picture blocks such that each uncompressed picture block comprises video data related to only one sub-picture;
 - generating a compressed video signal by using a video block based compression scheme to generate compressed picture blocks from the uncompressed picture blocks; and
 - 10 manipulating at least a first sub-picture of the compressed video signal by manipulating the association of control data with compressed picture blocks related to the first sub-picture without modifying compressed video data of compressed picture blocks.
2. A method as claimed in claim 1 wherein the step of manipulating at least the
- 15 first sub-picture comprises replacing compressed picture blocks of the first sub-picture with compressed picture blocks of a different picture without changing the control data.
3. A method as claimed in claim 1 wherein the step of manipulating at least the
- 20 first sub-picture comprises associating the control data of a second sub-picture with the compressed picture blocks of the first sub-picture.
4. A method as claimed in claim 1 wherein the control data comprises information related to the position of an associated sub-picture.
- 25 5. A method as claimed in claim 1 wherein the control data comprises identification data and the method further comprises the step of selecting the compressed data blocks of the first sub-picture by parsing the compressed video signal to detect identification data corresponding to the first sub-picture.

6. A method as claimed in claim 1 wherein the compressed video signal comprises a plurality of slices each slice comprising a slice header and a number of consecutive compressed picture blocks.

5 7. A method as claimed in claim 6 wherein each slice comprises a single compressed picture block.

8. A method as claimed in claim 6 wherein each slice comprises a number of compressed picture blocks corresponding to a width of a sub-picture.

10 9. A method as claimed in claim 6 wherein each slice comprises a number of compressed picture blocks corresponding to a width of a picture.

10. A method as claimed in claim 6 wherein the step of manipulating at least the
15 first sub-picture comprises manipulating a position of the first sub-picture by performing a shifting operation by replacing the compressed picture blocks of a slice with compressed picture blocks of another slice and/or modifying the control data.

11. A method as claimed in claim 6 wherein the step of manipulating at least the
20 first sub-picture comprises manipulating a position of the first sub-picture by performing a shifting operation by modifying the control data.

12. A method as claimed in claim 6 wherein the slice header comprises a slice number and the manipulation of the at least first sub-picture comprises manipulating the
25 vertical position of the first sub-picture by modifying slice numbers for slices comprising compressed picture blocks of the first sub-picture.

13. A method as claimed in claim 1 wherein the step of manipulating the at least first sub-picture further comprises replacing compressed picture blocks with pre-defined
30 compressed picture blocks without modifying the control data whereby pre-determined sub-pictures can be inserted in the compressed video signal.

14. A method as claimed in claim 1, wherein a given sub-picture is predictively coded and wherein all block motion vectors associated with the plurality of picture blocks

within the given sub-picture are set to a same value which depends on a displacement of the given sub-picture between a picture and a reference picture.

15. A method as claimed in claim 14, wherein the sub-picture displacement is
5 user-controllable.

16. A computer program enabling the carrying out of a method according to any
of the previous claims.

10 17. An apparatus for manipulating sub-pictures of a compressed video signal,
comprising:

means for receiving a compressed video signal comprising a plurality of sub-
pictures; wherein at least a first frame of the compressed video signal is divided into
15 compressed picture blocks by video block compression of uncompressed picture blocks, the
uncompressed picture blocks comprising video data related to only one sub-picture; and
means for manipulating at least a first sub-picture of the compressed video signal by
manipulating the association of control data with compressed picture blocks related to the
first sub-picture without modifying compressed video data of compressed picture blocks.